

**Automatic regression test**

When the software in the product(UUT) is updated, all the functionality should be retested. Usually the regression test is huge and it is not easy to perform it since the time and cost is limited. However, automatic running through the night using multiple Quality Commander makes it possible to do the regression test in timely manner.

**Automatic loading test**

You can perform the loading test on the product(UUT) if it works correctly. In case of mobile phones, it is required to test the arrival of the call or mail while executing the Java application, which consumes a lot of CPU power. Quality Commander can easily do such a loading test by performing the Java application scenario and the call arrival scenario at the same time.

**Automatic limitation test**

For example, if maximum address input test is ordered to do for the mobile phone, it is very hard to do by hand. In this case, Quality Commander can easily perform the test since it has the branch and loop command. Also such a capability that one scenario can call the other scenario makes it easier to perform those limitation tests.

**Final test**

It is possible that there is a difference in a preproduction unit and a production unit. Thus the final test should be performed on the production unit, which goes to the market for a user. Quality Commander can do the test without modifying the production unit which is the same condition at a user's hand.

**Use Quality Commander efficiently**

**There is a variety of usage for Quality Commander. The more you use it, the more you know that it is efficient and powerful.**



**Automatic functional test**

When you do the automatic test for the items on the test specification, product specification and user's manual, Quality Commander shows the great capability for those tests since it can describe the whole testing process in the scenario. You can also correctly estimate the time needed to perform the test.

**Cooperation test with a simulator**

When you want to do the test for mobile phones or car navigation systems, you may not be able to perform the test in an actual user's environment. In this case, cooperation test system of Quality Commander and a simulator can be used. The scenario can control both Quality Commander and the simulator in the cooperation test system to test the product (UUT) in a virtual environment.

**Automatic repeat test**

Since branch and repeat command can be used in the scenario, you can execute the scenario repeatedly. This test assures that the product(UUT) can function stably.

# Quality Commander

**New style in automatic testing**



**Manipulator**

Choose the manipulator which best matches to your product(UUT).



Naming	Plunger unit	XY Robot	6 Axis Robot
Features	<ul style="list-style-type: none"> <li>Fast button push</li> <li>Multiple button push</li> </ul>	<ul style="list-style-type: none"> <li>Touch panel push</li> <li>Push timing 2~3/sec</li> <li>Quiet operation</li> </ul>	<ul style="list-style-type: none"> <li>Touch panel push</li> <li>3 dimensional movement</li> <li>Rotate a knob</li> </ul>
Target products	<ul style="list-style-type: none"> <li>Mobile phones</li> <li>Car equipments</li> <li>Remote controller</li> </ul>	<ul style="list-style-type: none"> <li>Mobile phones</li> <li>PDA</li> <li>Touch panel products</li> </ul>	<ul style="list-style-type: none"> <li>Car equipments</li> <li>Complex shaped products</li> <li>Touch panel products (Vertically positioned)</li> </ul>

Function	
Hardware	Result output
<ul style="list-style-type: none"> <li>Button push</li> <li>Touch panel push</li> <li>Rotate a knob</li> <li>Capture of display picture</li> <li>Still picture</li> <li>Movie picture</li> <li>Sound recording</li> <li>Play back</li> </ul>	<ul style="list-style-type: none"> <li>Automatic DB recording of the execution results</li> <li>Report printing of the test results</li> <li>CSV file output of the test results</li> <li>Execution monitoring at a different PC</li> <li>Execution, pause of the test by a remote operation</li> <li>DB backup and restore</li> </ul>
Analysis	Others
<ul style="list-style-type: none"> <li>Still picture comparison</li> <li>OCR recognition</li> <li>Movie picture comparison</li> <li>Sound comparison</li> <li>DTMF sound analysis</li> <li>Setting comparison area</li> </ul>	<ul style="list-style-type: none"> <li>Hardware reset</li> <li>Bilateral test(Need 2 systems)</li> <li>Timer execution</li> <li>Mail delivery</li> <li>External equipment control (Simulator, programmable power supply, etc.)</li> <li>Control client PC's Windows application</li> </ul>

**Contact us**

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Step in the Next Quality World

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**XY Robot operates the touch panel switch.**

## Capture the picture

CCD camera captures the display picture of the products(UUT). Not only the still picture, but movie can be recorded.

## Push the button

XY Robot pushes the switch in the touch panel of the UUT.

**High speed and multiple operation using plunger unit**



## Sound recording and play back

System can record the output sound from the UUT. It also has the speaker unit to test the recording capability of the UUT.

# What's Quality Commander ?

Quality Commander is born in order to increase the quality of product evaluation for today's embedded system which has the highly complex functionality. Traditional manually operated product evaluation for the embedded system is to be replaced by the Quality Commander automatic qualification system, which utilizes the computer and robot manipulator. By using Quality Commander, you can visualize, measure, analyze and improve your evaluation process for the embedded system. As a result, you can get a big improvement in quality, time reduction and cost saving in the product evaluation.

**Quality improvement**

A small failure could introduce a big damage in today's complexed system. Quality Commander can always correctly and efficiently detect even a small failure which human being could easily overlook.

**Time reduction**


Quality Commander automatically performs the same test as the manual test which human being pushes the button and checks the display. Since Quality Commander operates faster, no rest, no loitering, you can get a faster result than a human being.

**Cost saving**

What you need is to set the test scenario and get the result after the operation. Thus no manual intervention is required. Further, regression test can be easily performed with the system by reusing the test scenario. Time reduction, minimized human power makes a big cost saving in product evaluation.


### 1 Environment setting

First, set the environmental data such as location of the switch or the button of the products (UUT). After the environment is defined, you can start the creation of the scenario.




### 2 Creating scenario

Test procedure is described in the scenario. High-level description such as branch and conditional statement can be input using a mouse click. Also, a scenario creation-assisting menu is provided to help to create a long scenario.



### 3 Automatic testing

Robot manipulator pushes the switch along with the instruction from the scenario. The timing to push the switch is programmable. All the executed commands and the results are automatically recorded in the database.



### 4 Result analysis

After the execution of the scenario, the results are automatically analyzed against the expected results. The result of the analysis is easily checked and possible to be output as a report.

